

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended): A method of obtaining a matrix value for sequence determination ~~for~~ of an actual nucleic acid sample performing matrix transformation from detected signal waveform to emitted signal waveform on a waveform signal obtained from a detection part for each fluorochrome by fluorochrome terminator labeling employing a plurality of fluorochromes having different fluorescent waveforms for obtaining a an emitted signal waveform for every base, and determining a base sequence on the basis thereof, wherein the method obtains a the matrix value for performing the matrix transformation from the actual sample migration through steps of:

① (1) extracting peaks from a proper range of the waveform signal obtained from each detection part during migration of the labeled nucleic acid sample;

② (2) eliminating peaks having irregular peak intervals;

③ (3) classifying the peaks into four groups corresponding to the types of bases based on the signal strengths for each of the remaining peaks according to predetermined group membership criteria;

④ (4) obtaining calculating signal strength ratios of for each of the classified the four groups according to a predetermined calculation method;

⑤ (5) allocating the corresponding bases to the classified four groups based on the signal strength ratios for each of the four groups according to predetermined base allocation criteria; and

⑥ (6) obtaining the matrix value by signal strength ratios of ~~peak waveforms~~ of the respective base groups.

2. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein

the proper range in the step ① (1) is a certain range of starting points of signals.

3. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein

the peaks extracted in the step ① (1) are such peaks that the strength of the maximum fluorochrome signal is larger than the minimum standard for peak detection in a used sequence determination program.

4. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein

~~such peaks that~~ peaks having signal strengths of fluorochromes of separate waveforms are larger than signal strengths of fluorochromes of adjacent waveforms are eliminated in the step ① (1).

5. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein

the four groups classified in the step ③ (3) are ~~upper the~~ four groups having ~~large the~~ largest peak numbers.

6. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein

the signal strength ratios in the step ~~④~~ (4) are either mean values or ~~central~~ median values.

7. (Currently amended): The method ~~of sequence determination~~ according to claim 6, wherein

the signal strength ratios are ~~central~~ median values.

8. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein,

~~the bases are allocated~~ in the step ~~⑤~~ (5) by, when the types of maximum detection signals of four groups are different from each other, the bases are allocated by allocating the types of these maximum detection signals as the base species of respective the groups.

9. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein,

~~the bases are allocated~~ in the step ~~⑤~~ (5) ~~on the basis of~~, when the types of maximum detection signals of two groups are identical to each other, the bases are allocated on the basis of the types of the third largest detection signals of the groups.

10. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein

the base sequence of the nucleic acid sequence is determined with the obtained ~~the~~ matrix value for thereafter obtaining a an optimized matrix value ~~again with~~ based on peak signals of the determined base sequence.

11. (Currently amended): The method ~~of sequence determination~~ according to claim 1, wherein

a set of conditions are ~~limited~~ predetermined thereby simplifying treatment in at least one

of the steps ① (1) to ⑥ (6).

12. (New): The method ~~of sequence determination~~ according to claim 11, wherein the set of predetermined conditions include the sensitivities of the detection parts as to bases A, T, G, and C.

13. (New): The method of sequence determination according to claim 11, wherein the set of predetermined conditions include the difference in mobility or strength between fluorochromes.

14. (New): The method according to claim 1, wherein the waveform signal is obtained from four detection parts with one detection part for each fluorochrome.

15. (New): The method according to claim 14, wherein four fluorochromes are used.

16. (New): The method according to claim 1, wherein, in step (3), peaks having abnormal signal strengths are eliminated.